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The Effects of Leadership Instructions and Sex-Pairing upon the Evolution of Self-Disclosure Dyads

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Running head: Self-Disclosure Dyads

Presented at the Annual Meeting of the American Educational Research Association, Toronto, Ontario

March 1978

Abstract

The development of self-disclosure within an acquaintance exercise was examined. Eighty subjects were assigned to same-sex or mixed-sex dyads. In half of the dyads, one member was asked, through a short statement in the written instructions, to encourage maximal disclosure in his/her partner. Dyad partners took turns discussing self-selected topics from a 72-item list of intimacy-rated choices. The resulting design allowed for testing the effects of sex-pairing, leader instructions, and subject sex on the intimacy of disclosure and the extent of reciprocity. Sex-pairing had no effect upon any measures. Leader instruction dyads showed significant linear and cubic trends in increasing intimacy over time, while the non-leader instruction dyads showed no temporal trends. Male subjects tended to disclose at levels somewhat higher than females. Generally, subject reciprocity was found unrelated to experimental factors, although one significant interaction between subject sex and leader condition is discussed.

The Effects of Leadership Instructions and Sex-Pairing upon the Evolution of Self-Disclosure Dyads

Altman and Taylor (1973) have theorized that interpersonal relationships develop slowly through reciprocal increases in breadth and depth of self-disclosure by the participants. Although there is much evidence to support reciprocity of self-disclosure (Cozby, 1973), many of the studies cited as support are based upon self-report rather than observed data or have employed a programmed confederate. Neither method speaks as powerfully to the issue at hand as does a design allowing arbitrarily paired free responders to develop a relationship at their own speed. Such a design has been implemented twice by Davis (1976, 1977).

Davis (1976) reported an investigation in which like-sex dyads took part in a get acquainted exercise. Each dyad partner took turns disclosing about themselves on topics that each had chosen from an intimacy-scaled list of disclosure topics. Davis found that even in a short interaction, his British-college-student subjects increased their self-disclosure over time in an approximately linear manner. However, the development of intimacy was found to be attributable to only one member of an arbitrarily-paired dyad. One partner tended consistently and unilaterally to set the intimacy level, and the other would reciprocate.

In a subsequent study, Davis (1977) tested an attempt to eliminate the unilateral control discovered in the initial investigation. By encouraging certain dyads to discuss the problem of how intimate to be

with one another, role asymmetry gave way to role symmetry. Rather than a slow increase in intimacy over the course of the several exchanges, subjects (again, British college students) in the discussion conditions tended to achieve a desired level of intimacy rapidly and subsequently tapered off slightly. Thus, a discussion between like-sex partners concerning the exercise itself (prohibited in the first experiment) produced more mutual control and direction of the increasing intimacy of disclosure.

Davis interpreted these results as evidencing two of three possible methods of determining who should control the evolution of an encounter: (a) If one member implicitly takes command, the other may choose to follow a collusive, passive role (e.g., Davis, 1976). (b) If communication about the process is explicit, the participants may collaborate to share control more or less equally (e.g., Davis, 1977). A third possibility, social competition, was not present in either study and was assumed to occur only where goals are discrepant and investment of both partners is high.

The objectives of this study were threefold: (a) to replicate the Davis' (1976, 1977) research on a different population -- American college students as compared to British college students; (b) to determine the extent to which the process of developing intimacy might be effected by a small change in experimental instructions -- an attempt to encourage asymmetry and leadership; and (c) to ascertain the effects of same-sex versus mixed-sex pairs in the development of self-disclosure.

Method

Subjects

Eighty volunteer college student subjects participated in the study. Since two institutions were represented in the subject pool, Antioch College (62) and the University of Cincinnati (18), and since subjects were volunteers, a more detailed breakdown of subject characteristics is appropriate.

There were 40 males and 40 females. Age ranged from 17 to 58 with an average of 25.7. Freshman comprised 13.8%; sophomores, 25.0%; juniors, 21.2%; seniors, 23.8%; and graduate students, 16.2%. The vast majority of subjects were caucasions (92.6%) although blacks (5%), native Americans (1.2%) and Asians (1.2%) were also represented. In terms of home town background, over half (53.8%) were from cities larger than a 250,000 population. About a fourth of the group came from middle-sized (10,000-250,000) and from small towns (23.1% from each category). Overall, 59.1% were from the Midwest; 32.1% from the East; 5.1% from the South; and 3.8% from the West.

Experimental Design and Procedure

Subjects were arbitrarily paired in like-sex or mixed-sex dyads subject to the condition that partners had, at most, minimal prior acquaintance. (In over half of the dyads, subjects performed the experiment during class time. In such cases, the pairing was strictly random. In other instances, subjects were paired with strangers, but this was not accomplished

employing strict randomization.) Each subject was provided detailed written instructions adopted from Davis (1976) describing the "getting to know you" exercise. Partners were asked to meet during class or privately, to follow the specific instructions, and to restrict their interaction exclusively to what was requested in the instructions.

Both like-sex and mixed-sex dyads were randomly assigned to either a leader instruction (L) or a non-leader instruction condition (NL). In the twenty dyads of the non-leader condition, partners received identical instructions. In the twenty dyads of the leader instruction condition, one partner (decided at random before the exercise) was instructed to "encourage your partner to tell you as much as possible about himself/herself as you take turns talking." The corresponding portion of the partner's written information sheet read: "your task is to try and get to know each other by taking turns telling your partner something about yourself." (This second instruction was identical to what both partners in the non-leader condition received.) This short statement given in the written instructions to one member of the leader groups comprised the sole difference between those who were encouraged unilaterally to take leadership and those who were not. Thus, four groups emerged: same-sex, identical instruction dyads; same-sex, surreptitious leader instruction dyads; mixed-sex, identical instruction dyads; and mixed-sex, surreptitious leader dyads.

The procedure for the exercise was as follows: (a) Subjects were to try and get to know one another by taking turns talking about themselves.

(b) A coin toss determined which partner would start. (c) On each turn, the disclosing partner was limited to a maximum of one minute by the other member of the dyad. (d) The listener remained silent and was not able to comment or ask questions about what the speaker said. (e) On each turn, the discloser selected a topic from a numbered list and announced the topic's number before beginning to speak. The topic, once chosen, could not be used again by either partner. Subjects were requested to select only those topics which they felt they could discuss freely and openly. (f) The exercise ended after subjects had each discussed twelve topics. The total process, including a careful reading of the instructions, normally took about one hour and fifteen minutes. (g) To observe the specific aims of the research, subjects were told the study involved "the way people get to know one another," and they were asked to record the exact durations of disclosure on each topic. Additionally, they were asked to rate the overall experience at the end of the exercise.

Topic List

Full details of the topic list are available in Davis (1976). Its major features include: (a) equal representation of 9 intimacy levels spanning an 11-point scale, (b) sufficient number of items (72) to permit repeated selection of either minimally or highly disclosing topics, and (c) counterbalancing to avoid possible confounding due to serial position. Subjects were unaware that the topics had been previously scaled for intimacy.

Results

Since none of the data analyses revealed significant differences for

sex-pairing (same-sex versus mixed-sex dyads) or its interactions, the results are combined across this factor.

Social Penetration

A social penetration index was calculated for each subject by averaging the intimacy scale values of the 12 disclosures. Mean values of the index were very nearly the same for the two leader conditions (M_L = 5.49, M_{NL} = 5.38), F (1, 38) < 1, indicating that overall penetration was unaffected by leader instructions. Although the linear trend over time does not interact with condition at traditional levels of significance, the difference in linear trend between the two treatments is relatively improbable by chance alone [$p < .15$, F (1, 38) = 2.14].

For illustrative purposes, the interaction between leader condition and time is graphed in Figure 1. Separate trend analyses for each condition are shown in Table 1. Because of the lack of significant interaction between trend and condition, these separate trend analyses should be interpreted with considerable caution. In the Leader instruction groups, there is a powerful linear trend, F (1, 20) = 11.78, $p < .005$, and a significant cubic trend, F (1, 20) = 5.56, $p < .05$. No other significant findings are noted, including trend by dyad interactions. In the non-leader instruction group, there was no significant linear, quadratic, or cubic trend: Variation in quadratic trend between dyads, F (19, 20) = 2.83, $p < .05$, is the only significant finding in the trend analysis of non-leader groups. These data suggest that unlike the non-leadered groups in Davis' studies (1976, 1977), the subjects in NL condition in the present investigation would not have increased their social penetration had the exercise

continued for a longer time.

Insert Table 1 about here

Insert Figure 1 about here

Mutual Agreement on Levels of Intimacy

The intraclass correlations for the L and NL conditions on total penetration were r (18) = .60, $p < .01$, and r (18) = .26, $p > .05$, respectively. (The difference between the conditions is not statistically reliable, $p < .10$, one-tailed.). Thus, the effect of a leadership instruction seems to have been, if anything, to enhance the level of agreement on overall intimacy.

In terms of mutual agreement on level of intimacy on a turn-by-turn basis, however, the present data appears to be at odds with Davis' (1976, 1977) findings. The trend by Subjects within Dyads interaction represents a measure of the turn-by-turn matching between subjects within the dyad on level of intimacy. Whereas the mean square for Davis' (1977) non-discussion group was 1.43, the equivalent condition in the present study (NL) showed a mean square of 6.33. Thus, there appears to be substantially less trend matching and turn-by-turn agreement on levels of intimacy in the American sample.

Responsibility

To clarify the process whereby matching of overall intimacy [r_L (18) =

.60 and r_{NL} (18) = .26] was achieved, a reciprocity index was determined for each subject by computing the product-moment correlation between the intimacy scale values of each disclosure and the immediately preceding disclosures of the partner. An r to z transformation was then performed to allow for subsequent analysis. (Pairs of scores entering into correlations numbered 11 for subjects going first and 12 for their partners.) The intraclass correlations between partners' scores on the reciprocity index in the L and NL conditions were r (18) = - .31, and r (18) = .12, respectively. Neither correlation is significantly different from zero, and the difference between the two correlations does not quite reach significant ($p < .10$, one-tailed test). Reciprocity in the leader condition tended to be asymmetrical: the more one member of a dyad engaged in reciprocation, the less the partner did so. Was the partner who received the leader instruction the individual who tended to increase or decrease intimacy without regard to the partner? Apparently not! Subjects within the leader condition had identical reciprocity means ($M = .15$) whether they had been the individual receiving the surreptitious instructions or not! It may be that individuals with leader instructions chose to "encourage their partners to tell them as much as possible" by following either one of two possible traits: (a) initiating self-disclosure changes and producing low or negative reciprocity scores or (b) facilitating the same exploration by accepting a passive role and following the partner fairly closely to encourage continuing disclosure (a positive or higher reciprocity score).

Role differentiation, then, tended to occur in a somewhat more pronounced manner in the leader instruction dyads than in the non-leader dyads.

In Davis' (1976) study, it was found that the "leading" role in a dyad tended to fall to its more disclosing member, who proceeded relatively independently in choice of topics. The less disclosing member assumed the reciprocator role. This role differentiation was unrelated to the order of starting. The effect of relative disclosure within a dyad was similarly addressed in the present study by identifying each subject as either the more or less disclosing member of the dyad. This identification provided the disclosure factor for an analysis of variance of reciprocity scores (Table 2). The only significance in the results (see Table 2) was that the reciprocity across all subjects was significantly greater than zero $\left[F\ (1,\ 38) = 8.25,\ p < .01 \right]$. This indicates that reciprocity occurred systematically across all dyads. The disclosure effect was not replicated (it had not been replicated in Davis' 1977 study, either), and there were no significant differences between conditions in reciprocity.

Insert Table 2 about here

Thus, if responsibility for the development of intimacy is altered by the leader instructions, the present analysis of reciprocity scores has been unable to find indications of this alteration. Roles of subjects in leader and non-leader conditions do not appear to be differentiated based upon group assignment or level of disclosure.

Sex of Subject

Unlike the Davis studies (1976, 1977), the present investigation did find significant differences due to sex of subject. The data related to these analyses are reported in Tables 3 and 4. Because the present design employed mixed-sex as well as same-sex dyads, the dyad could not be incorporated as a factor in the design for the analyses of these issues. Thus, a more conservative statistician might well criticize the appropriateness of a subjects-within-interaction error term. Since the mean square within is essentially equivalent to the mean square of dyads within conditions (calculated earlier), the effects of the inclusion of the dyad source of variance in the error term seems likely to be minor.

Insert Table 3 about here

Insert Table 4 about here

As Davis (Note 1) has indicated, the males in the sample tended to disclose at higher levels overall than did females (Table 3), F (1, 76) = 3.58, $p < .06$. Such a finding, based upon earlier research (Cozby, 1973) is relatively unexpected.

Table 4 presents data illustrative of the systematic reciprocity across all subjects (significant grand mean). The leader/non-leader by sex interaction, however, is also significant [F (1, 76) = 5.15, $p < .03$]. This interaction is graphed in Figure 2.

Discussion

The objectives of this study had been stated as threefold: (a) replication of British findings on self-disclosure with an American sample, (b) determination of the extent to which the development of intimacy could be influenced by a unobtrusive suggestion for "leadership," and (c) clarification of differences between same- and mixed-sex dyads.

Replication

It seems apparent that the population of British college students represented in Davis' studies (1976, 1977) and the group of American college students involved in the present study are quite different in their reactions to the same "get-acquainted" exercise. Whereas Davis' subjects averaged above a 5.0 disclosure level on only one-third of their total trials, the present subjects averaged below 5.0 on only one-fourth of their trials. The fact that British subjects initiated their exercise at a substantially lower point than did the Americans may well have made it more difficult to locate significant trends in the data. Perhaps the stereotypic impression of the reserved and conservative Englishman does gain some validation in the comparison drawn here. On the other hand, what may be operative is a relatively unique American college student population. Over three-quarters of the subjects in the present study were students at Antioch College, an institution whose faculty and students take considerable pride in their college's time-honored tradition of liberal education and politics. The College's reputation as a lesder in educational innovation may well attract a student body that would react

uniquely to a get-acquainted exercise. Because of this possibility, additional replication is suggested.

The NL condition in the present study was equivalent to the treatment outlined in Davis (1976). The American sample, without leader instructions, showed no significant trends across time. In essence, the fluctuations in means over time could be just as well explained by chance. The lack of a significant trend for the development of intimacy in this group is in need of further investigation. Is it merely a unique characteristic of this particular subject pool? Or, does the difference represent more general characteristics in culture?

Influencing the Process

There is some evidence that a surreptitious instruction to encourage maximal disclosure does create a difference in the development of a self-disclosure dyad. Whereas the non-leader instruction groups showed no significant temporal trends, the leader instruction groups had significant linear and cubic trends over time. Additionally, the subjects within the leader groups tended to agree more on overall level of penetration (overall self-disclosure) but tended to act more independently of one another in selection of intimacy level on a turn-by-turn basis. The leader instruction dyads, unlike their counterparts without a leader instruction, appeared to have not yet reached an asymptotic level of disclosure by the end of the exercise.

It should be noted that the experimenters' attempt to influence one member of the dyad to become the initiator was a failure. There was no evidence that the individual receiving the surreptitious instruction was,

necessarily, the person creating the observed trends. What actually precipitated the apparent differences between conditions is something that will need further investigation to identify. The actual leader instruction involved one written phrase: "encourage your partner to tell you as much as possible about himself/herself as you take turns talking." This instruction does not specify how one is to attempt to encourage self-disclosure. As a result, even if every subject receiving this treatment had attempted to maximize their partner's disclosure, it is very possible they could have each approached the task differently. A future study with either or both of the following changes is recommended: (a) instruct subjects specifically on what to do to increase partner disclosure (e.g., talk about yourself in as disclosing terms as possible) or (b) provide similar instructions with a careful and detailed debriefing, aimed at determining exactly how subjects attempted to implement the leader request.

Mixed versus Same-Sex Dyads

The fact that a subject participated in a mixed-sex as opposed to same-sex dyad did not effect the results in any significant manner. In every test involving type of sex-pairing, this factor was found to be non-significant as a main effect and in its interactions with other factors.

Sex of Subject

Contrary to most existing literature (Cozby, 1973), the present study found males tend to disclose at higher levels than females. This was apparently the case across both same- and mixed-sex dyads because no interactions with the sex-pairing factor were significant. That this same finding was reported by Davis (Note 1) may indicate that something unique to

the particular exercise may influence males to disclose at higher levels than females.

Figure 2 symbolizes the interaction between subject sex and leader instruction on the reciprocity index scores. Although females tend to respond reciprocally in both leader and non-leader conditions, males seem to respond in kind only under the leader condition. Subjects in non-leader dyads show a negative reciprocity mean ($M_{males\ in\ NL} = -.08$). Whether the individual had received the leader instruction himself or whether his partner had, the leader dyads tended to be more symmetrical in their development of intimacy. With neither person attempting to encourage maximal disclosure, it appears that males tended to go off in their own direction irregardless of the partner's (male or female) disclosure. (This might mean that males receiving the leader instruction responded by attempting to increase partner disclosure through closer listening and reciprocity.)

Future Research Possibilities

Firstly, it must be noted that the stylized nature of the exercise carried out in this investigation is only a broad approximation of the actual development of a relationship between two people. Its application to naturalistic acquaintance is highly questionable. It would be appropriate to attempt data collection, perhaps through tape recordings, of a less systematic, more naturalistic acquaintance exercise.

If a leader instruction as minor and surreptitious as that employed in the present investigation can effect the self-disclosure in a developing relationship, certainly a more direct and more potent instruction could cause a more pronounced effect. Counselors or therapists, for example,

know going into a session that their job is to encourage maximal disclosure in the client. How is the therapeutic process related to the developing of self-disclosure dyads as described here? This is a potentially fascinating area of research.

Reference Notes

1. Davis, J. D. Personal communication, March 28, 1977.

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Altman, I. & Taylor, D. A. Social penetration: The development of interpersonal relationships. New York: Holt, Rinehart & Winston, 1973.

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Table 1

Temporal Trend Analyses for Level of Intimacy

Source	Linear			Quadratic			Cubic			Remainder		
	df	MS	F	df	MS	F	df	MS	F	df	MS	F
Leadership Instruction Condition												
Trend (T)	1	56.12	11.78**	1	15.41	3.29	1	21.74	5.56*	8	61.22	1.36
Tx Dyads	19	8.64	1.81	19	5.97	1.28	19	4.88	1.25	152	55.84	1.25
Tx Subjects Within Dyads	20	4.76		20	4.68		20	3.91		160	44.79	
Non-leadership Instruction Condition												
Trend (T)	1	1.13	.18	1	5.64	1.53	1	9.82	1.18	8	63.10	1.17
Tx Dyads	19	10.70	1.69	19	10.43	2.83*	19	6.74	.81	152	54.88	1.01
Tx Subjects Within Dyads	20	6.33		20	3.68		20	8.32		160	53.88	

* $P < .05$

** $p < .005$

Table 2

Analysis of Variance of Reciprocity Scores:

Factors Include Leader/Non-Leader Groups and High/Low Disclosure

Source	df	MS	F
Grand Mean	1	.986	8.25**
Leader/Non-leader Group (A)	1	.157	1.32
Error (Dyads within A)	38	.119	
Disclosure (B)	1	.004	.03
A x B	1	.002	.01
Error (Dyads x B within A)	38	.135	

** $p < .01$

Table 3

Analysis of Variance of Average Disclosure Scores:

Factors include Leader/Non-Leader Groups

and Sex of Subject

Source	df	MS	F	P<
Grand Mean	1	2364.04	2514.94	-
Leader/Non-Leader Groups (A)	1	.22	.23	.61
Sex of Subject (B)	1	3.36	3.58	.06
A x B	1	1.42	1.51	.21
Error (Subjects within AB)	76	.94		

Table 4

Analysis of Variance of Reciprocity Scores

Factors Include Leader/Non-Leader Groups

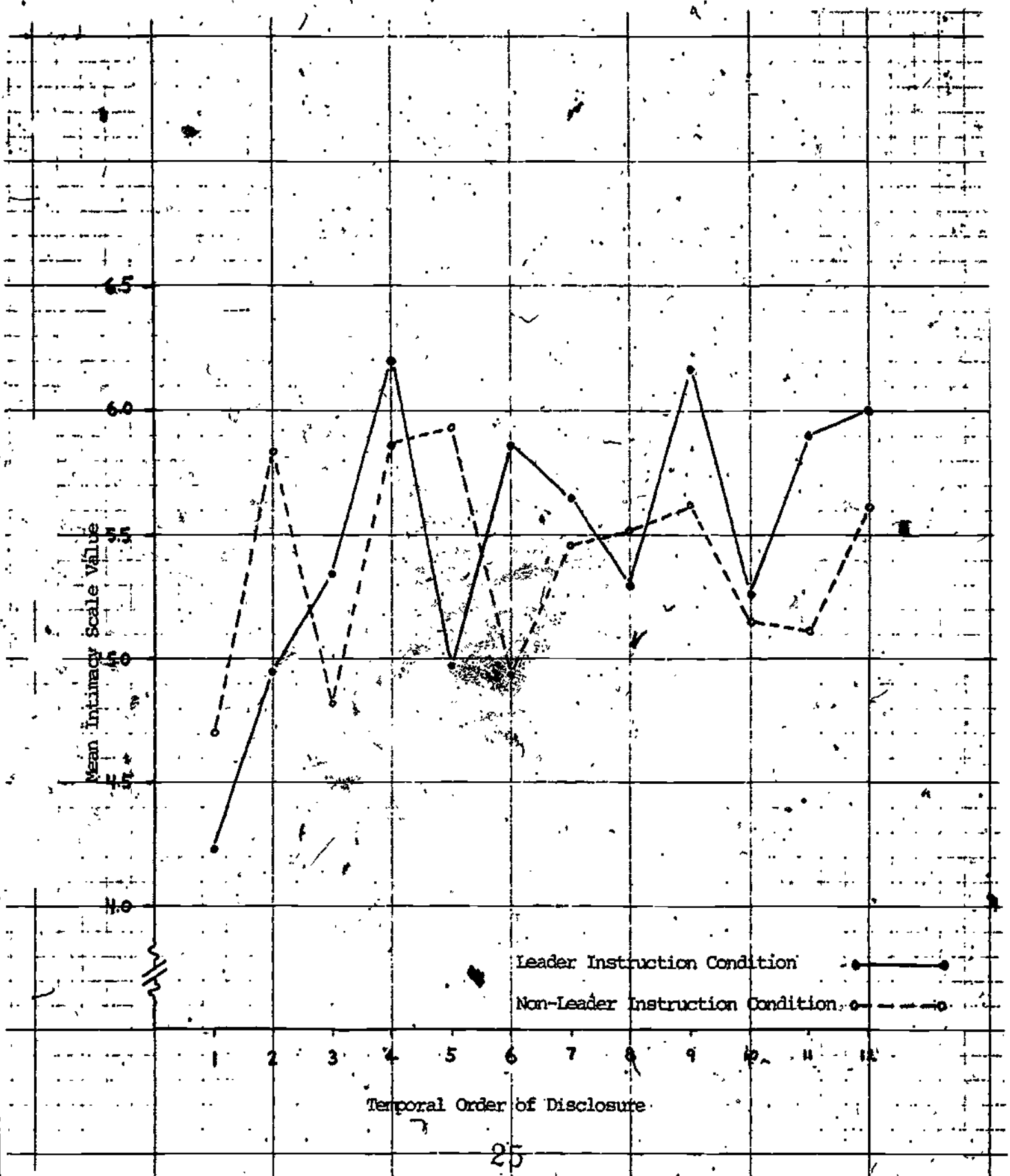
and Sex of Subject

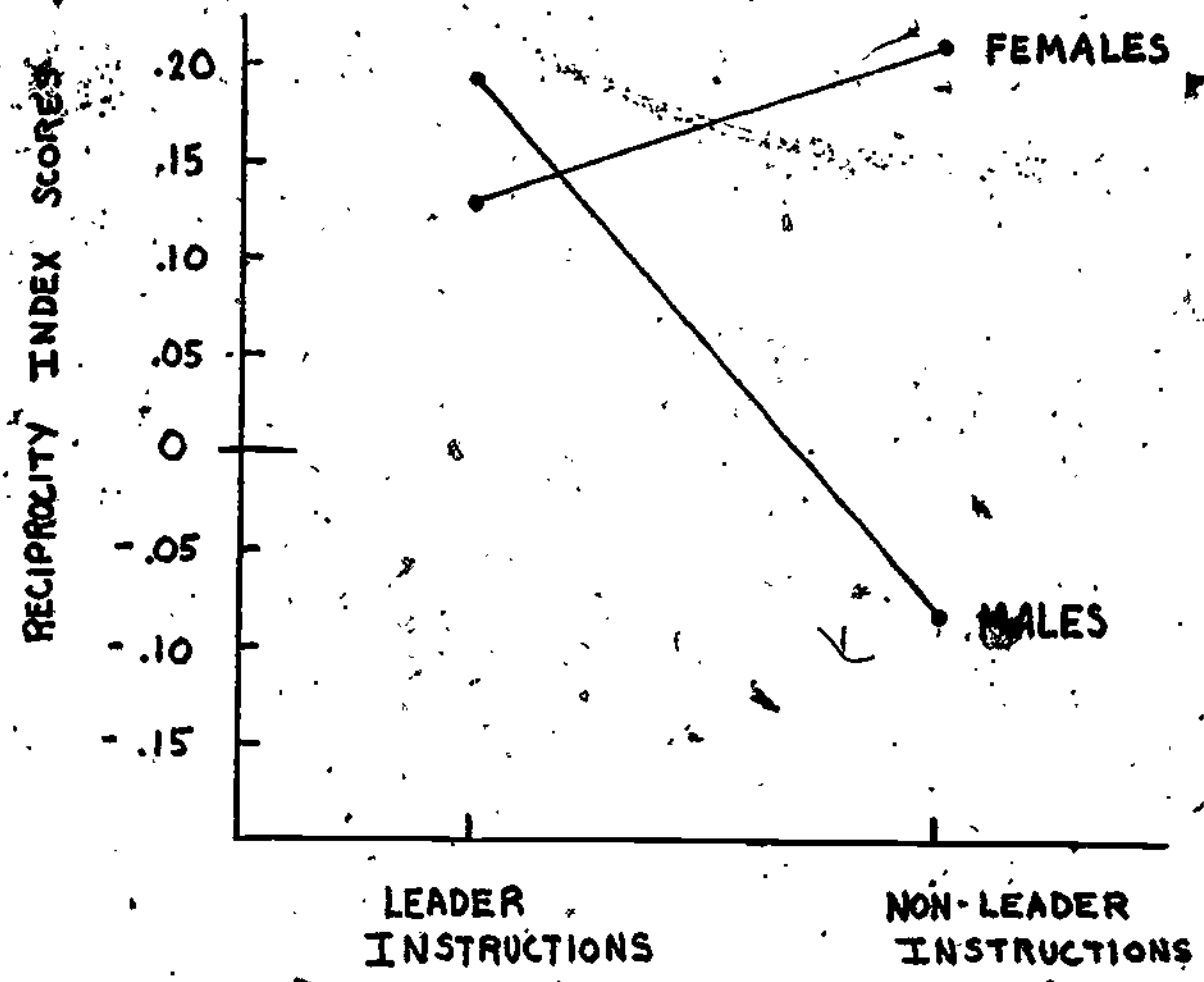
Source	df	MS	F	P
Grand Mean	1	.986	8.57	.006
Leader/Non-Leader Groups (A)	1	.157	1.36	.24
Sex of Subject (B)	1	.284	2.47	.12
A x B	1	.592	5.15	.03
Error (Subjects within AB)	76	.115		

Figure Captions

Figure 1. Mean intimacy scale value as a function of temporal order of disclosure.

Figure 2. Interaction between sex-of-subject and leader instruction condition on reciprocity index.


6.5
6.0
5.5
5.0
4.5
4.0
Mean Intimacy Scale Value
Leader Instruction Condition
Non-Leader Instruction Condition
1
2
3
4
5
6
7
8
9
10
11
12
Temporal Order of Disclosure


RECIPROCITY INDEX SCORES
.20
.15
.10
.05
0
-.05
-.10
-.15
FEMALES
MALES
LEADER INSTRUCTIONS
NON-LEADER INSTRUCTIONS